

ABSTRACT

A polarization conversion system uses patterned half-wave retarder material and a polarizing beam splitter. The retarder material is applied to a surface of the polarizing beam splitter or other substrate before patterning. Patterning is accomplished by exposing the retarder material to oriented light, and may be done using an optical mask, or may be done through the polarization beam splitter. Selected areas of the patterned retarder layer produce no net rotation of light from the polarizing beam splitter, while other areas rotate light ninety degrees, thus providing polarization conversion.